

What is AMD64 technology?

AMD64 technology is AMD's approach to 64-bit computing which doubles the number of processor registers and increases the addressable memory space well beyond 4GB for increased performance and new, cinematic-computing experiences. Processors with AMD64 technology offer leading-edge performance on today's software applications while enabling a seamless migration to future 64-bit computing.

What is HyperTransport™ technology?

HyperTransport™ technology is a high performance, easy-to-implement system interconnect technology originally invented by AMD. It is designed to increase overall system performance by removing I/O bottlenecks, increasing bandwidth, and reducing latency. HyperTransport technology implemented in the AMD Athlon™ 64 FX processor enables a system bus to run at 1600MHz. The total delivered processor-to-system bandwidth is up to 12.8GB/sec allowing for high speed I/O communication and increased performance.

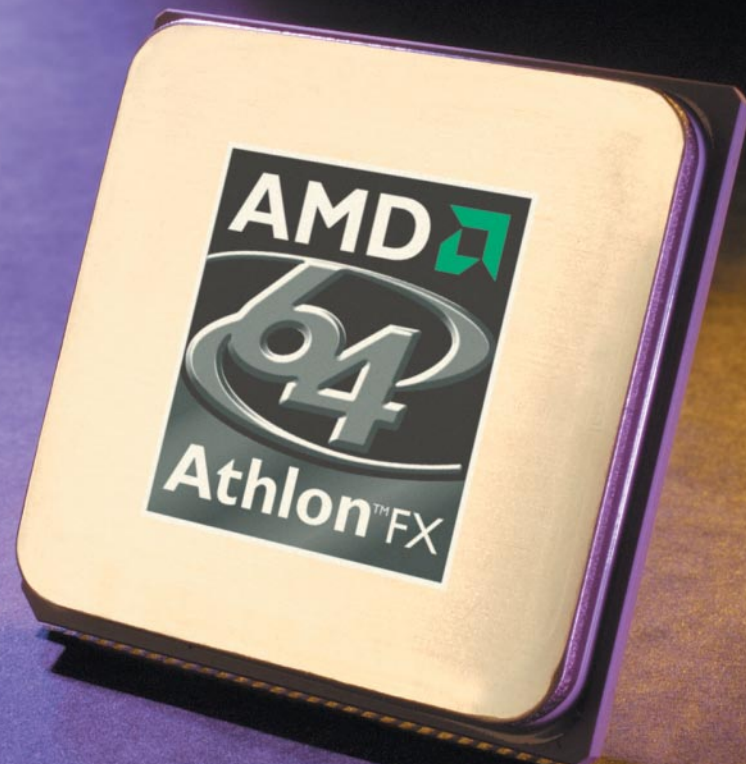
What is the integrated DDR memory controller?

The AMD Athlon 64 FX processor fully integrates a DDR memory controller with a 128-bit wide path to memory. The 128-bit integrated DDR memory controller utilizes industry standard DDR memory technology, providing extreme bandwidth (up to 6.4GB/sec) for the most demanding applications. In addition, the 128-bit integrated DDR memory controller significantly reduces memory latency (the time it takes to get data out of memory), thus greatly improving overall application performance for virtually all applications.



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30657A



Presenting the world's
best PC processor.

The AMD Athlon™ 64 FX processor



AMD proudly introduces the only Windows®-compatible 64-bit PC processor. Built to provide the highest software performance and immersive, cinematic-computing experiences, this is the best PC processor you can get.

The first PC processor designed for cinematic computing

- Provides an extraordinary level of realism and awesome 3D graphics
- Blows your mind with cinema-quality gaming – where fire looks like fire and shots sound like a cannon
- Tackles the most demanding entertainment and content-creation software with ease

The world's most technically advanced PC processor, packed with innovations

- Opens up extreme memory bandwidth for the most demanding applications – up to 6.4GB per second!
- Offers up to 12.8 GB/sec total processor-to-system bandwidth for increased system performance
- Features the industry's largest on-die, high-performance cache memory system for PC processors

Revolutionary AMD64 technology

- Doubles the number of general purpose and SSE/SSE2 registers
- Increases memory addressability well beyond 4GB
- Shatters the barriers to new and advanced 64-bit software
- Delivers skull-shaking performance for current and future applications – even simultaneous 32- and 64-bit computing

Features and benefits

Features	Benefits
AMD64 Technology <ul style="list-style-type: none"> • Seamless, simultaneous 32- and 64-bit computing • Doubles the number of processor registers and significantly increases addressable memory space 	<ul style="list-style-type: none"> • Leading-edge performance for today's software • Compelling way to take advantage of emerging 64-bit apps for new computing experiences and capabilities • Cinema-quality games, real-time results for digital media
HyperTransport™ Technology <ul style="list-style-type: none"> • 1600MHz system bus; up to 12.8GB/sec total processor-to-system bandwidth • Designed to reduce bottlenecks, increase bandwidth, and reduce latency 	<ul style="list-style-type: none"> • Higher overall system performance • Better multi-tasking • Quicker application loading • Enhanced multimedia
128-bit Integrated DDR Memory Controller <ul style="list-style-type: none"> • Directly connects processor to memory • Supports PC 3200*, PC2700, PC2100, or PC1600 • Up to 6.4GB/sec memory bandwidth 	<ul style="list-style-type: none"> • Lower memory latency – one of the most common bottlenecks • Significant performance boost, especially for digital media and 3D games • Smoother-running systems, with ECC protection for higher reliability
High-Performance, On-Die Cache <ul style="list-style-type: none"> • World's largest high-performance, on-die cache memory system for desktop PCs • L1: 128KB, L2: 1024KB, total effective cache 1152KB 	<ul style="list-style-type: none"> • Greatly enhanced performance, especially on large memory workloads like digital media and intense 3D games
3D and Multimedia Instructions <ul style="list-style-type: none"> • 3DNow!™ Professional technology <ul style="list-style-type: none"> - AMD innovation for enhanced 3D and multimedia • Now incorporating SSE2 instructions 	<ul style="list-style-type: none"> • Compatible with the largest installed base of multimedia-enhanced software • Realistic images, precise digital audio and an enriched Web experience

*The AMD Athlon 64 FX processor's support of registered PC3200 DDR is pending JEDEC approval of the specification.

The best PC processor you can get.

- The first 64-bit PC processor, in a class by itself, designed specifically for cinematic computing
- Only AMD64 technology runs today's 32-bit and tomorrow's 64-bit software
- Full-throttle technology for immersive gaming and amazing digital media

About AMD series numbers

The series number for the AMD Athlon 64 FX processor communicates relative performance among AMD Athlon 64 FX processors. The series number begins with the number "51," which is planned to increase by increments of "2" for each successive processor. For example, the next processor in the series will be the AMD Athlon 64 FX-53 processor.

